REMARKS

Claims 1-34 were pending at the time of the Action. Claims 1, 3-4, 12, 18-19, 21, 23, 26, and 34 have been amended. Claims 16, 32, and 35-49 have been canceled. Thus, claims 1-15, 17-31, and 33-34 remain pending in the application. In view of the foregoing amendments and the following remarks, Applicant respectfully requests that the Office issue a Notice of Allowability for all pending claims.

Drawing Objections

In the outstanding Action, the Office objects to the drawings for three different reasons. Non-Final Office Action of May 22, 2007, p. 5-6. Applicant has amended the specification as shown above, thus obviating the grounds for the first two of the three objections. Applicant thus respectfully requests that the Office withdraw these objections.

In regards to the third objection, the Office objects to Applicant's use of reference character "24" in the application. Specifically, the Office objects to Applicant's drawings because "reference character '24' has been used to designate both bi-directional flow of communications between host business services 22 and service manager 34 and flow of communications between network 16 and client 18". Id. at p. 6. Applicant respectfully submits, however, that the use of reference character 24 by Fig. 1 and the specification appears to be correct. As such, Applicant respectfully requests that the Office withdraw this last drawing objection. Applicant also thanks the Office for its reconsideration.

Specification Objections

In the Action, the Office objects to alleged informalities in the specification. Non-Final Office Action of May 22, 2007, p. 6-7. Applicant has amended the specification as shown above, thus obviating the grounds for these objections. Applicant thus respectfully requests that the Office withdraw the objections.

Claim Rejections under 35 U.S.C. § 112

Claims 1, 12, 16, and 21 stand rejected under 35 U.S.C. § 112, second paragraph as lacking antecedent bases. Claims 3, 4, 15, 18-19, 23, and 34 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Non-Final Office Action of May 22, 2007, p. 7-8. Applicant respectfully traverses the rejections. Nevertheless, for the sole purpose of advancing prosecution and without conceding the propriety of Office's rejections, Applicant has amended these claims, thus obviating the grounds for the rejections. Applicant therefore respectfully requests that the Office withdraw the rejections.

Claim Rejections based on Non-statutory Double Patenting

Claims 1-34 stand rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-35 of U.S. Patent No. 7,139,844 in view of U.S. Patent Application Ser. No. 09/871,427. Non-Final Office Action of May 22, 2007, p. 8-12. Applicant respectfully requests that the Office holds these rejections in abeyance until the remaining claim rejections have been withdrawn.

Claim Rejections under 35 U.S.C. § 103

Claims 1, 6, 8-10, 14, 21, 25-26, and 28-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,513,019 to Lewis (hereinafter, "Lewis") in view of U.S. Patent Publication No. 2004/0254921 to Cohen et al. (hereinafter, "Cohen"). Non-Final Office Action of May 22, 2007, p. 12.

Claims 2-3, 5, and 22-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis in view of Cohen in further view of U.S. Patent No. 4,868,866 to Williams, Jr. (hereinafter, "Williams"). Id. at p. 15.

Claims 4 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis in view of Cohen in further view of U.S. Patent No 6,645,421 to Wynblatt et al. (hereinafter, "Wynblatt"). Id. at p. 18.

Claims 7 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis in view of Cohen in further view of U.S. Patent No. 6,072,870 to Nguyen et al. (hereinafter, "Nguyen"). Id. at p. 19.

Claims 11-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis in view of Cohen in further view of U.S. Patent No. 5,878,418 to Polcyn et al. (hereinafter, "Polcyn"). Id. at p. 20.

Claims 13 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis in view of Cohen in further view of Polcyn and in further view of U.S. Patent No. 6,847,971 to Balaraman et al. (hereinafter, "Balaraman"). Id. at p. 21.

Claims 16, 19-20, 32, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis in view of Cohen in further view of U.S. Patent Publication No. 2007/0078978 to Arnold et al. (hereinafter, "Arnold"). Id. at p. 23.

Claims 17-18 and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lewis in view of Cohen in further view of Arnold and in further view of U.S. Patent No. 6,839,680 to Liu et al. (hereinafter, "Liu"). Id. at p. 25.

Applicant respectfully traverses the rejections. Nevertheless, for the sole purpose of expediting allowance and without conceding the propriety of the Office's rejections, Applicant has amended independent claims 1 and 21 to recite subject matter previously present in dependent claims 16 and 32, respectively.

As amended, **claim 1** recites a method for processing information provided from at least one content provider about a state of a plurality of objects, the states being subject to periodic updates, and for delivering formatted information indicating a current state of at least a portion of the plurality of objects to a plurality of clients via a data communication network in substantially real-time, the method comprising the steps of (added language emphasized):

- in an information manager:
    - receiving raw data objects on at least one raw data stream input;
    - generating a formatted data object from a received raw data object;
    - storing a current state of the formatted data object in an object storage pool; and
    - broadcasting the current state of the formatted data object on a particular broadcast data stream;
- in a client manager:
    - establishing communication sessions with a plurality of clients;
    - connecting to at least one broadcast data stream;

- receiving on a connected broadcast data stream a current state for a specific data object;

- updating an object pool cache to reflect the current state of the specific data object; and

- transmitting the current state of the specific data object to a set of clients selected from the plurality of clients;

- ***wherein each connected client has a respective client event queue, the step of transmitting the current state of the specific data object to the set of clients comprises the steps of, for each respective client in the set of clients:***

    - ***placing a state event in the client event queue associated with the respective client, the state event indicating the current state of the particular data object; and***

    - ***subsequently transmitting a client event derived from at least the state event in the client event queue to the respective client.***

In making out a rejection of Applicant's claim 1, the Office states that the combination of Lewis and Cohen render this claim obvious. Applicant respectfully disagrees. Nevertheless, Applicant has amended claim 1 to include subject matter from now-canceled claim 16 for the sole purpose of expediting allowance. In making out a rejection of the additional subject matter previously present in claim 16, meanwhile, the Office cites Arnold and states that one skilled in the art would be motivated to combine Arnold with Lewis and Cohen, thus rendering Applicant's claim 16 obvious. Applicant respectfully disagrees.

Arnold describes techniques for updating information in a low-bandwidth client/server object-oriented system. According to the patent application, Arnold describes attempting to transmit an identified packet of data from a first computing system to a second computing system. If the second computing system receives

the identified packet, then the second computing system sends an acknowledgment to the first computing system. If the second computing system does not successfully receive the identified packet of data, then the first computing system may attempt to resend the packet. Arnold, abstract.

Additionally, Arnold describes the use of queues to transmit information from a client to a server, or vice versa. For instance, Arnold includes Fig. 24 (reproduced below), which is a diagrammatic representation of a client/server system which queues data that is created and modified on a client for storage on a server.

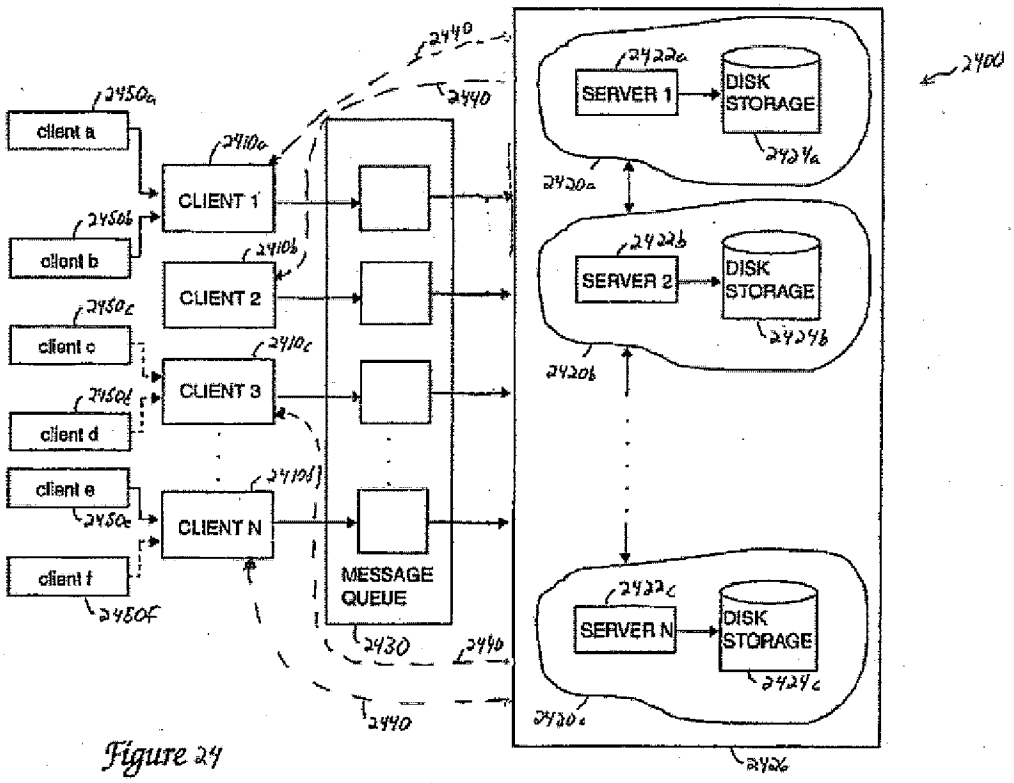

Figure 24

Arnold goes on to describe Fig. 24 and the use of queues in paragraph [0157], which the Office cites as teaching Applicant's claim 16. In this paragraph, Arnold states, in part:

> [0157] *Clients 2410, which generally include data storage capabilities, may communicate either directly with overall server 2426 or through a "smart" message queue 2430* which is effectively a part of clients 2410 and overall server 2426. Clients 2410 queue data on message queue 2430 when, for example, data has been modified and is to be sent to overall server 2426....*Alternatively, overall server 2426 may send data to clients 2410 using a queue (not shown). As described above, overall server 2426 may maintain a queue or queues of objects in which clients 2410 have interest. Hence, data may be transmitted to clients 2410 from overall server 2426 via such queues....*
>
> Arnold, paragraph [0157] (emphasis added).

This portion of Arnold thus states, in total, that clients may communicate with a server via the use of queues and/or servers may communicate with clients with the use of queues.

Applicant's claim 1 as amended, however, recites "*placing a state event in the client event queue* associated with the respective client, the state event indicating the current state of the particular data object; and subsequently *transmitting a client event derived from at least the state event in the client event queue to the respective client.*"

Applicant respectfully submits that neither Arnold nor any of the cited references have been shown to teach or suggest "placing a state event in a client event queue" and subsequently "transmitting a client event *derived from* the state event"...to a client. At most, Arnold has been shown to teach using queues to pass data back and forth between clients and servers. Merely passing data via these

queues, however, fails to teach or suggest *deriving* a second event from a first event that has been placed in a queue, and transmitting the second event to a client.

For at least this reason, Applicant respectfully submits that this claim stands allowable.

Additionally, Applicant respectfully submits that Arnold fails to teach or suggest "placing a state event in the client event queue associated with the respective client, *the state event indicating the current state of the particular data object*". Instead, Arnold merely describes that Arnold's clients and servers may *communicate data* via a queue—but Arnold entirely fails to teach or suggest that such data "indicat[es] the current state of [] particular data", as recited in Applicant's claim. Applicant further notes that no other reference has been shown to teach or suggest this claim element.

For at least this additional reason, Applicant respectfully submits that this claim stands allowable.

Claims 2-15 and 17-20 depend from claim 1 and, as such, the remarks made above in regards to claim 1 apply equally to these claims. The rejections of these claims are also improper as failing to teach or suggest these claims' own recited features which, in combination with those recited in claim 1, are not shown to be taught or suggested in the reference of record.

Claim 21 has been amended and, as amended, recites a system for processing information provided from at least one content provider about a state of a plurality of objects, the states being subject to periodic updates, and for delivering formatted information indicating a current state of at least a portion of the plurality of objects to a plurality of clients via a data communication network in substantially real-time, the system comprising (added language emphasized):

- an information manager comprising at least one raw data stream as input, an object pool configured to store formatted data objects, and at least one broadcast data stream as output, each raw data stream carrying a plurality of raw data objects;

- the information manager configured to:

    - generate a formatted data object from a received raw data object;

    - store a current state of the formatted data object in the object storage pool; and

    - broadcast the current state of the formatted data object on a particular broadcast data stream;

- a client manager receiving at least one broadcast data stream as input, comprising an object pool cache, and connectable to a plurality of clients;

- the client manager configured to:

    - establish communication sessions with a plurality of clients;

    - connect to at least one broadcast data stream;

    - receive on a connected broadcast data stream a current state for a specific data object;

    - update an object pool cache to reflect the current state of the specific data object; and

    - transmit the current state of the specific data object to a set of clients selected from the plurality of clients;

- ***wherein the client manager further comprises a delivery manager comprising a client event queue associated with each client;***

- ***the delivery manager configured to:***

- ***queue state events directed to a particular client in the client event queue associated with the particular client, the state events indicating the current state of specific data objects; and***

- ***transmit a client events derived from queued state events to the respective client.***

Claim 21 has been amended to recite subject matter previously present in now-canceled claim 32. In making out a rejection of claim 32, the Office states that the combination of Lewis, Cohen, and Arnold render this claim obvious for reasons identical to those discussed above in regards to claims 1 and 16. Therefore, for at least reasons similar to those discussed above, Applicant respectfully submits that this claim stands allowable. For instance, Applicant respectfully submits that the cited references at least fail to disclose or suggest the language emphasized above.

For at least these reasons, Applicant respectfully submits that this claim stands allowable.

Claims 22-31 and 33-34 depend from claim 21 and, as such, the remarks made above in regards to claim 21 apply equally to these claims. The rejections of these claims are also improper as failing to teach or suggest these claims' own recited features which, in combination with those recited in claim 21, are not shown to be taught or suggested in the reference of record.

Conclusion

It is believed that each of these claims is allowable and furtherance to issuance is respectfully requested. If the Office's next anticipated action is to be anything other than issuance of a Notice of Allowability, Applicant respectfully requests a telephone call for the purpose of scheduling an interview.

Respectfully Submitted,

Dated: 2007/10/19

By: _____

Robert G. Hartman
Reg. No. 58,970
(509) 324-9256 x265